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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,564	12/08/2003	Kevin J. Barefield		4239

7590 02/13/2007  
Pennington, Moore, Wilkinson, Bell & Dunbar, P.A.  
Post Office Box 10095  
Tallahassee, FL 32302-2095

EXAMINER
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STAICOVICI, STEFAN

ART UNIT	PAPER NUMBER
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1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/730,564

**Applicant(s)**

BAREFIELD ET AL.

**Examiner**

Stefan Staicovici

**Art Unit**

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11,12,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-12, 20-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. Applicants' amendment filed December 21, 2006 has been entered. Claims 11-12 and 20-21 are pending in the instant application.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-12 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killian (US Patent No. 4,184,784) in view of Zimmermann *et al.* (US Patent No. 5,372,767) and in further view of Brown (US Patent No. 3,859,780) and Davis (US Patent No. 3,660,887).

Killian ('784) teaches the basic claimed process for infusing a region of strands in a rope (cable) including, exposing a plurality of strands, dipping said exposed strands into a thermosetting resin, removing said dipped strands, centering said dipped strands inside an anchor and curing (hardening) said thermosetting resin to thereby bond said strands to said anchor (see col. 3, line 61 through col. 4, line 7). It is submitted that a thermosetting resin that cures over time transitions from a liquid state to a solid state.

Regarding claims 11 and 20, although Killian ('784) teaches infusing the strands with a thermosetting resin and removing said infused strands prior to curing, Killian ('784) does not

teach infusing resin using the anchor as mold. However, Brown ('780) teaches a process for infusing strands with a thermosetting resin, wherein dipping a plurality of strands in a mold containing a thermosetting resin is an equivalent alternative to positioning the strands in the mold and then introducing the thermosetting resin in the mold (see col. 2, lines 5-20). Zimmermann *et al.* ('767) teaches an injection molding process for infusing a rope (3) with a resin including, providing a mold cavity, placing said rope in said cavity and introducing resin to infuse said rope (see Abstract). Further, Zimmermann *et al.* ('767) teaches a mold (1) having a mold cavity and a needle (4) extending into said mold cavity. Furthermore, Zimmermann *et al.* ('767) teaches an injecting runner (14) for introducing resin, wherein said injecting runner (14) is located proximate the tip of the needle (4) (see Figure 1). It is submitted that the injector forms a sealing surface in order for resin to be introduced under pressure into the mold cavity and that the needle is removed prior to the resin solidifying. Therefore, in view of the teachings of Brown ('780) that dipping a plurality of strands in a mold containing a resin is an equivalent alternative to positioning the strands in the mold and then introducing the resin in the mold, it would have been obvious for one of ordinary skill in the art to provide the injection molding set-up of Zimmermann *et al.* ('767) in the process of Killian ('784) because, Zimmermann *et al.* ('767) teaches an efficient process for infusing a plurality of strands with a resin, whereas Killian ('784) requires such infusion, thereby suggesting the process of Zimmermann *et al.* ('767) and also because Brown ('780) specifically teaches that dipping a plurality of strands in a mold containing a resin is an equivalent alternative to positioning the strands in the mold and then introducing the resin in the mold.

Further regarding claims 11 and 20, Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) do not teach that the anchor itself constitutes the mold. However, it is well known to use the anchor as a mold as evidenced by Davis ('887) who teaches a process for infusing a plurality of strands with resin including, using an anchor as a mold as an equivalent alternative to using a separate mold (see col. 5, lines 39-52). Therefore, it would have been obvious for one of ordinary skill in the art to use the anchor itself as a mold as taught by Davis ('887) in the process of Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) because, Davis ('887) specifically teaches that in a process for infusing a plurality of strands with resin using an anchor as a mold is an equivalent alternative to using a separate mold.

In regard to claims 12 and 21, although Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) and Davis ('887) teach an injection molding process, Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) do not teach a vacuum vent channel. However, the use of a vacuum vent channel in an injection molding process is well known. Therefore, it would have been obvious for one of ordinary skill in the art to provide a vacuum vent channel in the injection molding process of Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) and Davis ('887) because of known advantages such as reduced porosity, hence providing for an improved product.

***Response to Arguments***

4. Applicant's arguments filed December 21, 2006 have been considered.

5. In response to applicant's arguments against the teachings of Davis ('887) individually, it is noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981) and In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. Applicants argue that the art of record does not teach or suggest injecting the liquid potting compound under pressure (see pages 9-10 of the amendment filed 12/21/2006). However, as shown above, Zimmermann *et al.* ('767) teaches an injection molding process for infusing a rope (3) with a resin including, providing a mold cavity, placing said rope in said cavity and introducing resin under pressure to infuse said rope (see Abstract).

7. In response to applicant's argument that there is no suggestion to combine the references (see page 10 of the amendment filed 12/21/2006), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case,

(a) the primary reference, Killian ('784), teaches a process for infusing a region of strands in a rope (cable) including, exposing a plurality of strands, dipping said exposed strands

into a thermosetting resin, removing said dipped strands, centering said dipped strands inside an anchor and curing (hardening) said thermosetting resin to thereby bond said strands to said anchor (see col. 3, line 61 through col. 4, line 7);

(b) the secondary reference, Brown ('780), teaches a process for infusing strands with a thermosetting resin, wherein dipping a plurality of strands in a mold containing a thermosetting resin is an equivalent alternative to positioning the strands in the mold and then introducing the thermosetting resin in the mold (see col. 2, lines 5-20);

(c) the secondary reference, Zimmermann *et al.* ('767), teaches an injection molding process for infusing a rope (3) with a resin including, providing a mold cavity, placing said rope in said cavity and introducing resin under pressure to infuse said rope (see Abstract); and

(d) the secondary reference, Davis ('887), teaches a process for infusing a plurality of strands with resin including, using an anchor as a mold as an equivalent alternative to using a separate mold (see col. 5, lines 39-52).

Therefore, it would have been obvious for one of ordinary skill in the art to use the anchor itself as a mold as taught by Davis ('887) in the process of Killian ('784) in view of Zimmermann *et al.* ('767) and in further view of Brown ('780) because, Davis ('887) specifically teaches that in a process for infusing a plurality of strands with resin using an anchor as a mold is an equivalent alternative to using a separate mold. Further, it is noted that, the "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those

references would have suggested to those of ordinary skill in the art.” See MPEP §2145(III), citing, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

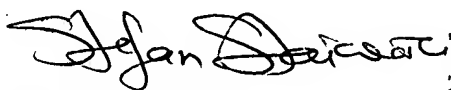
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD

  
Primary Examiner

2/9/02

AU 1732

February 9, 2007